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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/802,874	03/18/2004	Hideo Matsunaga	Q80281	5453

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EXAMINER

PASSANITI, SEBASTIANO

ART UNIT PAPER NUMBER

3711

DATE MAILED: 05/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No. 10/802,874	Applicant(s) MATSUNAGA ET AL.	
	Examiner Sebastiano Passaniti	Art Unit 3711	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on see detailed Office action.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☒ Certified copies of the priority documents have been received in Application No. 10/188,043.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>3/18/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This Office action is responsive to communication received 03/18/2004 – application papers filed; 06/17/2004 – Drawings.

This application is a CIP of 10/188,043, filed 07/03/2002, pending.

Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copies have been filed in parent Application No. 10/188,043, filed on 07/03/2002. Claims 1-12 are pending.

Following is an action on the MERITS:

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsuchiya ('217) in view of Motomiya ('931), Hoshi ('560) and Tsuchida ('913). The patent to Tsuchiya shows every feature claimed with the exception of a crown and side portion each having a Young's modulus lower than the face and sole portions, a rib on the sole portion and the specific claimed Young's modulus values. More specifically, Tsuchiya fails to disclose that the crown and at least part of the side portion are collectively press-molded together while the face and sole are molded separately therefrom. Instead, Tsuchiya shows that the club head pieces are of substantially the same material, while the thickness of selective pieces, notably the crown, is thinned in order to provide added repulsion force to a struck ball, thereby resulting in a longer

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flying distance (see the abstract in Tsuchiya). Specific to claims 2 and 8, Motomiya shows it to be old in the art to fabricate a hollow club head using plural shell pieces, one of which incorporates the top or crown section along with a portion of the sides of the shell. The remaining diverse shell pieces define a face portion and a sole portion. See Figure 5 in Motomiya. The embodiment in Figure 5 of Motomiya is but one of several arrangements for the preparation of the shell pieces, with the further embodiments in Figures 2-4 detailing alternative designs for fabricating the distinct shell components. Tsuchiya likewise displays a plethora of club head shell combinations, which are assembled to form a hollow shell. See Figures 8A-8C in Tsuchiya. In view of the patent to Anderson, it would have been obvious to modify the device in the cited art reference to Tsuchiya by forming the crown and at least a part of the side portion together, with the remaining portions (i.e., sole and face) formed separately and subsequently joining all of these pieces to come up with a complete hollow club head, the motivation being to simply provide another convenient manner in which to join the club head pieces. Specific to claims 6 and 12, note that Motomiya further obviates the use of a rib (215), a part of which extends along the sole for reinforcement purposes. In view of this further teaching by Motomiya, it would have been obvious to modify the Tsuchiya device by providing a rib along the sole, the motivation being to enhance the strength of the hollow shell adjacent the sole. Tsuchida is cited to show that it is old in the art to provide a golf club head with a top portion that exhibits a lower modulus than the remainder of the shell. More specifically, the crown portion (5) is made of a first material with a modulus of 210 GPA, while the remainder of the shell is made of a material having a modulus of

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between 150-250 GOA (col. 6, lines 44-57). Although Tsuchida is mainly concerned with a club head in which the center includes a core material (12), a similar arrangement showing the flexibility of the crown is evidenced in a club head having a hollow interior, such being the case with the further teaching to Hoshi. Specifically, Hoshi shows a club head in which the crown portion (14b) is made of a material in the which the Young's modulus differs from the modulus of at least the sole portion (col. 6, lines 4-16). In a manner similar to Tsuchida, the crown in the Hoshi device is allowed to flex during impact of the clubface with a ball so that the flight distance of the ball is increased and the sweet spot area of the clubface is enlarged to better enhance the directional stability of a struck ball. See col. 1, lines 35-45 in Hoshi and col. 6, lines 18-29 in Tsuchida. All of Tsuchiya, Hoshi and Tsuchida are concerned with enhancing the repulsion characteristics of the face for increasing the flying distance of a struck golf ball. Thus, in view of the patents to Hoshi and Tsuchida, it would have been obvious to modify the device in the Tsuchiya device by fabricating the crown portion from a material that is diverse from the material of the remaining shell members, the motivation being to provide another means for increasing the flexure of the crown on impact of a golf ball with the clubface, the flexure creating improved flight of the struck ball. Specific to claims 3 and 9, Tsuchiya shows a crown having a thickness between 0.6 and 3mm (col. 10, lines 10-14). Specific to claims 4, 5, 10 and 11, while Tsuchiya does not disclose the specific values for Young's modulus, it is clear from a reading of the entirety of the prior art documents cited that the selection of a material or combination of materials to take advantage of the known properties of said material(s) would have been obvious to

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one having ordinary skill in the art. In addition, the obviousness in the selection of a known material has been established under the Patent statutes. See *In re Hopkins*, 145 USPQ 140. Moreover, the patent to Hoshi details that the construction of the club head, particularly the thickness of the shell pieces, is carried out with a consideration of the Young's modulus of the material selected for the head (col. 2, lines 56-65). In Hoshi, a distinct relationship has been acknowledged among the desired Young's modulus, the thickness of the crown and the material chosen. Since the applicant has not invented the claimed materials having the claimed Young's modulus values and since the applicant has merely selected materials exhibiting a Young's modulus that is optimally compatible with the particular thickness of the shell, the specific claimed values are not deemed critical.


Applicant is respectfully reminded to maintain a clear line of demarcation between the limitations in the instant claims and the claims of the copending '043 application in order to avoid the need to address any instance of double patenting or obviousness-type double patenting throughout the remainder of prosecution of the instant application.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sebastiano Passaniti whose telephone number is 571-272-4413. The examiner can normally be reached on Mon-Fri (6:30-3:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Greg Vidovich can be reached on 571-272-4415. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Sebastiano Passaniti
Primary Examiner
Art Unit 3711

S.Passaniti/sp
May 12, 2005